

ABSTRACT OF THE DISCLOSURE

The invention provides a magnetoresistive element in which the pinned magnetic layer includes at least one non-magnetic film and magnetic films sandwiching that non-magnetic film, and the magnetic films are 5 coupled with one another by magnetostatic coupling via the non-magnetic film. This element has an improved thermal resistance. Furthermore, the invention provides a magnetoresistive element in which the pinned magnetic layer is as described above. The magnetic films can be coupled with one 10 another by magnetostatic coupling or antiferromagnetic coupling generating negative magnetic coupling. In this element, the magnetic field shift is reduced. Furthermore, the invention provides a magnetoresistive element in which at least one of the magnetic layers sandwiching the intermediate 15 layer includes an oxide ferrite having a plane orientation with a (100), (110) or (111) plane. A magnetic field is introduced in a direction of the axis of easy magnetization in the plane. This oxide can be formed by sputtering with an oxide target while applying a bias voltage to a substrate including a plane on which the oxide ferrite is to be formed so as to adjust the amount of oxygen supplied to the oxide ferrite from the target.